



# HARTCROWSER

Earth and Environmental Technologies

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## MEMORANDUM

**DATE:** December 29, 1993

**TO:** Greg Rapp and Norm Linton, Potlatch Corporation

**FROM:** David Winter

**RE:** Results of December 1993 Site Visit and Testing  
Avery Landing  
J-2296-04

On December 4 and 5, 1993, Chris Holloway of Hart Crowser was at the Avery Landing site to purge and clean the wells, to remeasure the product and groundwater levels, and to collect an additional product sample for testing. This memorandum summarizes the results of his on-site activities and the chemical analyses data. Attached is Table 1 combining our October and December information.

The two wells with about four feet of product, HC-4 and No. 11, were purged of the product and surged with water in an attempt to verify the product thickness. The full product thickness had not returned to the wells by the time we left the site. Because of the viscosity of the product and the current cold temperatures, it may take some time for the conditions in those wells to again reach equilibrium. We obtained an additional product sample from HC-4 and submitted it to the laboratory for testing. The chemical test results are:

Arsenic	< 2.4 mg/kg (ppm)
Cadmium	< 0.24 mg/kg
Chromium	< 0.48 mg/kg
Lead	< 1.4 mg/kg
Flash Point	> 180 degrees F
Total Organic Halides	< 40 mg/kg

< = Not detected at detection limit indicated.

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These results are consistent with previous analyses, and below regulatory limits for used oil burned for energy recovery.

I plan to meet with you in St. Maries on January 12, 1994, as we discussed, to review the planned remediation and develop a general work plan for installation. No further site activities seem necessary or possible until the spring. Would you please send us a copy of your final agreed upon Consent Order?

PTLCHDEC.MEM

Attachment:

Table 1 - Status of Monitoring Wells at Avery Landing

**Table 1 – Status of Monitoring Wells at Avery Landing**

Well No.	Ground Surface	Bottom	Product Elevation		Groundwater Elevation		Notes
	Elevation	Elevation	Oct. 1993	Dec. 1993	Oct. 1993	Dec. 1993	
	in Feet						
HC-1R	-2.17	-20.17	None	None	-15.87	-14.98	Installed 10/93
HC-3	-0.46	-18.56	None	None	-15.36	-14.8	Silty; Surged and Purged
HC-4	-0.88	-18.88	-11.88	-13.88	-15.88	-14.18	Purged 12/93; Sampled
HC-5	-1.86	-19.86	None	None	-13.96	ND	Installed 10/93; Water Covered 12/93
No. 1	-1.26	-10.56	None	None	None	None	
No. 2	-1.59	-10.69	None	None	None	None	Installed new cap
No. 3	-1.72						Well obstructed
No. 4	-1.53	-17.53	-14.23	-14.33	-14.53	-14.63	
No. 5	-1.8	-15.65	None	ND	-14.5	ND	Brush- and snow-covered 12/93
No. 6	-1.56	-10.66	None	ND	-10.16	ND	Installed new cap
No. 9	-0.98	-10.98	None	None		None	
No. 11	-1.99	-16.99	-11.99	0.3 ft thick	-15.99	ND	Purged 12/93

Note: Relative elevations based on center of 30-ft x 50-ft concrete slab nearby

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